



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D2892-1
Job Sheet 173684



Part No: D2892-1

Job Qty: 10 ea

Part Name: Support



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 3/6/18

Job Tracking No:

Due Date: 4/16/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG REV B IPP C 02.11.26 Added P/O KJ IPP D 08.03.19 Re-format EC verified by: DD IPP Rev:E 11.08.04
as per dwg rev.B DD verf:EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	10 Ea	4/13/18	4/13/18	0.00	0.00	Start Up Machining-1		KT 2018-06-02
100	CNC Vertical Machining	10 pcs	4/14/18	4/14/18	0.36	8.47	HAAS1-2		KT 2018-06-02
120	QC	10 pcs	4/14/18	4/14/18	0.00	0.00	QC8		13/06/18
130	Crosstubes	10 pcs	4/16/18	4/16/18	0.00	1.61	Crosstubes-2		JMO 07/06/2018
140	QC	10 pcs	4/16/18	4/16/18	0.00	0.00	QC3		
170	Packaging	10 pcs	4/16/18	4/16/18	0.00	0.00	Packaging3-1		AB JUN 12 2018
180	QC21-SA	10 Ea	4/16/18	4/16/18	0.00	0.00	QC21		21 JUN 12 2018

Part Op 100 - 1-Machine as per Folio FA082

Descriptions: 130 - Per note 8 on page 1 of dwg D2892, Prep inner concave surface of support and apply 3M Scotch-Weld as per dwg.
24h of cure time 138676 exp 11/18

170 - LOCATION : LG050

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
DSK077	D2892-1 Turning Detail	5 Ea (.5 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	DSK077	5	9	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	2.250 Support	0.115Inches + 0.035 - 0.000	0.150 0.115		
2	2.250 Support	0.290Inches + 0.020 - 0.000	0.310 0.290		
3	2.250 Support	0.040Inches + 0.020 - 0.000	0.060 0.040		
4	2.250 Support	0.115Inches + 0.035 - 0.000	0.150 0.115		
5	2.250 Support	0.240Inches + 0.020 - 0.000	0.260 0.240		

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

6	2.250 Support	0.188Inches	+ 0.005 - 0.000	0.193 0.188
7	2.250 Support	0.240Inches	+ 0.020 - 0.000	0.260 0.240
8	2.250 Support	1.116Inches	+ 0.040 - 0.000	1.156 1.116
9	2.250 Support	0.454Inches	+ 0.020 - 0.000	0.474 0.454
10	2.250 Support	0.240Inches	+ 0.020 - 0.000	0.260 0.240
11	2.250 Support	0.053Inches	+ 0.020 - 0.000	0.073 0.053
12	2.250 Support	0.257Inches	+ 0.005 - 0.000	0.262 0.257
13	2.250 Support	1.663Inches	+ 0.020 - 0.000	1.683 1.663
14	2.250 Support	0.053Inches	+ 0.020 - 0.000	0.073 0.053
15	2.250 Support	0.022Inches	+ 0.020 - 0.000	0.042 0.022
16	2.250 Support	2.779Inches	+ 0.010 - 0.000	2.789 2.779

Plex 3/6/18 12:51 PM Dart.lajeunesse.marie

DART
AEROSPACE

Container No: S077394



Part: D2892-1

Job No: 173684

Serial No/Batch: S077394

Revision:

Inspector:

Exp Date: 06/02/2018

Instructions:

1614 Main Street
Newbury, ON K84 1K7
CANADA
TEL.: 1 813 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 08/02/18

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																															
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																				
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																				
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																				
Large Fab ☐	Composite ☐	Supplier ☐																																																																					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval																																																																
Description Work Order Deviation				Disposition				Completed By																																																															
								Lead hand / Supervisor Approval Verification																																																															
								QC / QA Coordinator Approval																																																															
Root Cause <table style="width:100%; border: none;"> <tr><td>Environment ☐</td><td>No Re-verification ☐</td></tr> <tr><td>Design ☐</td><td>Operator ☐</td></tr> <tr><td>Doc/Data ☐</td><td>Offset/Setup ☐</td></tr> <tr><td>Equip/Tooling ☐</td><td>Supplier ☐</td></tr> <tr><td>Handling/Pre ☐</td><td>Training ☐</td></tr> <tr><td>Material ☐</td><td>Use for Testing ☐</td></tr> <tr><td>Internal Transport ☐</td><td>Poor Information ☐</td></tr> <tr><td>Tribal Knowledge ☐</td><td>Rushing ☐</td></tr> <tr><td>LOA ☐</td><td>Product Improvement ☐</td></tr> <tr><td>Substation ☐</td><td>Process Improvement ☐</td></tr> <tr><td>Past Expiry Date ☐</td><td>Manufacturing Process ☐</td></tr> <tr><td>Misidentified ☐</td><td>Past Due ☐</td></tr> </table>		Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	FAULT CATEGORY <table style="width:100%; border: none;"> <tr><td>Pressure/Forced ☐</td><td>Temperature/Cure ☐</td><td>Power Loss/Surge ☐</td><td>Positioned Wrong ☐</td></tr> <tr><td>Bending ☐</td><td>Set-up ☐</td><td>Folio/Program ☐</td><td>Outside Dimensions ☐</td></tr> <tr><td>Centre Not Concentric ☐</td><td>BOM/Route ☐</td><td>Grain ☐</td><td>Over/Under tolerance ☐</td></tr> <tr><td>Cracks ☐</td><td>Broken/Damage/Defect ☐</td><td>Weld ☐</td><td>Part Incorrect ☐</td></tr> <tr><td>Crimp/Kink/Ripple/Wave ☐</td><td>Inspection Incomplete/Unqualified ☐</td><td>Wrong Stock Pulled ☐</td><td>Part Lost/Missing ☐</td></tr> <tr><td>Cuffs ☐</td><td>Contamination ☐</td><td>Out of Sequence ☐</td><td>Part Moved ☐</td></tr> <tr><td>Crushing ☐</td><td>Countersink ☐</td><td>Off-set ☐</td><td>Drawing ☐</td></tr> <tr><td>Heat Treat ☐</td><td>Cut Too Short ☐</td><td>Mislabeled ☐</td><td>Finish ☐</td></tr> <tr><td>Wave/Twist in Tube ☐</td><td>Instructions Incomplete/Unclear ☐</td><td>Fit/Function ☐</td><td>Misread ☐</td></tr> <tr><td>Marks/Chatter ☐</td><td>Drill Holes ☐</td><td>Misaligned/off center ☐</td><td>Turning Sequence ☐</td></tr> </table>						Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Environment ☐	No Re-verification ☐																																																																						
Design ☐	Operator ☐																																																																						
Doc/Data ☐	Offset/Setup ☐																																																																						
Equip/Tooling ☐	Supplier ☐																																																																						
Handling/Pre ☐	Training ☐																																																																						
Material ☐	Use for Testing ☐																																																																						
Internal Transport ☐	Poor Information ☐																																																																						
Tribal Knowledge ☐	Rushing ☐																																																																						
LOA ☐	Product Improvement ☐																																																																						
Substation ☐	Process Improvement ☐																																																																						
Past Expiry Date ☐	Manufacturing Process ☐																																																																						
Misidentified ☐	Past Due ☐																																																																						
Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																				
Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																				
Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																				
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																				
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																				
Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																				
Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																																																																				
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																				
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																				
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																				
		OTHER : _____																																																																					

DART AEROSPACE LTD		Work Order:	173604
Description: Ø2.500 Support		Part Number:	D2892-1
Inspection Dwg: D2892	Rev: B	Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	0.115	0.150		0.132	0.132	0.132	0.132	0.132
AB	0.290	0.310		0.300	0.300	0.300	0.300	0.300
AC	0.040	0.060		0.045	0.045	0.045	0.045	0.045
AD	0.115	0.150		0.125	0.125	0.125	0.125	0.125
AE	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AF	0.188	0.193		0.188	0.188	0.188	0.188	0.188
AG	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AH	1.116	1.156		1.141	1.141	1.144	1.144	1.143
AI	0.454	0.474		0.467	0.467	0.467	0.467	0.467
AJ	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AK	0.053	0.073		0.0625	0.0625	0.0625	0.0625	0.0625
AL	0.257	0.262		0.257	0.257	0.257	0.257	0.257
AM	1.663	1.683		1.679	1.679	1.679	1.679	1.679
AN	0.053	0.073		0.0625	0.0625	0.0625	0.0625	0.0625
AO	0.022	0.042		0.0325	0.0325	0.0325	0.0325	0.0325
AP	2.779	2.789		2.784	2.784	2.784	2.784	2.784
AQ								
AR								
AS								
AT								
Accept/Reject								

Measured by:	DAS 1/15	Date:	2018-06-02
Audited by:	9-89 7/15	Date:	18/06/05
Preliminary Approval:		Date:	

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	
C	12.01.31	Dwg Rev updated	KJ	
D	13.05.22	Dimensions updated	KJ	

DART AEROSPACE LTD		Work Order: 173084
Description: Ø2.500 Support		Part Number: D2892-1
Inspection Dwg: D2892	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	0.115	0.150		0.132	0.132	0.132	0.132	0.132
AB	0.290	0.310		0.300	0.300	0.300	0.300	0.300
AC	0.040	0.060		0.045	0.045	0.045	0.045	0.045
AD	0.115	0.150		0.125	0.125	0.125	0.125	0.125
AE	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AF	0.188	0.193		0.188	0.188	0.188	0.188	0.188
AG	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AH	1.116	1.156		1.143	1.143	1.143	1.139	1.139
AI	0.454	0.474		0.467	0.467	0.467	0.467	0.467
AJ	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AK	0.053	0.073		0.0625	0.0625	0.0625	0.0625	0.0625
AL	0.257	0.262		0.257	0.257	0.257	0.257	0.257
AM	1.663	1.683		1.679	1.679	1.679	1.679	1.679
AN	0.053	0.073		0.0625	0.0625	0.0625	0.0625	0.0625
AO	0.022	0.042		0.0325	0.0325	0.0325	0.0325	0.0325
AP	2.779	2.789		2.784	2.784	2.784	2.784	2.784
AQ								
AR								
AS								
AT								
Accept/Reject								

Measured by: DAS 1	Date: 2018-06-02
Audited by: 9-89	Date: 18/06/05
Preliminary Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	
C	12.01.31	Dwg Rev updated	KJ	
D	13.05.22	Dimensions updated	KJ	